

# Work Order ID 59214

Friday, May 28, 2010 9:23:20 AM



Page 1

Item ID: D3953-21

Accept



Setup Start



Revision ID:

Item Name: Gas Spring Bracket

Stop



Start Date: 5/27/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 6/4/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

*[Signature]*

Date: 10-5-28

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3953

C

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

304 . 125

1-Cut as per Dwg D3953

Dwg Rev: *E*

Prog Rev: *E*

2-Deburr if necessary

*B 10-5-31*

*ES 10/06/01*

*(8)*

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

*B 10-5-31*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 59214**

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Page 2

Item ID: D3953-21

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Item Name: Gas Spring Bracket

Stop



Start Date: 5/27/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 6/4/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

S 10/06/01

Quality Control

(17)

Ph →

130

Memo

0.00



Small Fab

Memo

0.00

Small Fab

1- CHAMFER HOLE AS PER DWG

2- DEBURR IF NECESSARY

E 50/06/02 (17)

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

S 10/06/02

Quality Control

(17)

W/O: 59214		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/6/01	#120	Took Qty #1 Per inspection template	S	10/6/01	#1		S 10/6/01

Part No: D3953-21 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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**Work Order ID 59214**

Friday, May 28, 2010 9:23:20 AM



Page 3

Item ID: D3953-21

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Revision ID:

Item Name: Gas Spring Bracket

Stop



Start Date: 5/27/2010 Start Qty: 12.00



Cust Item ID:

Required Date: 6/4/2010 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Identify as per dwg &amp; Stock Location:

163

0.00



Packaging

Memo

0.00

Packaging

10-6-2

17x

SP

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/06/03

W. W. 06.03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Friday, May 28, 2010 9:23:26 AM

Page 1

Work Order ID: 59214



Parent Item: D3953-21



Parent Item Name: Gas Spring Bracket

Start Date: 5/27/2010

Required Date: 6/4/2010

Comments: IPP RevA: new issue DD 09.11.30 verified by:EC  
dwg revC DD 10.03.02 verified by:EC

IPP Rev:B as per

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA		Purchased	No			100	sf	35.9300	0.0144	0.181895	3		



304/316 0.125 Sheet



HB 10-5-31

Location

Loc Qty

Loc Code

MAT

35.93

114488

35.93

114488

18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



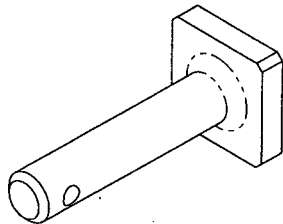


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RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

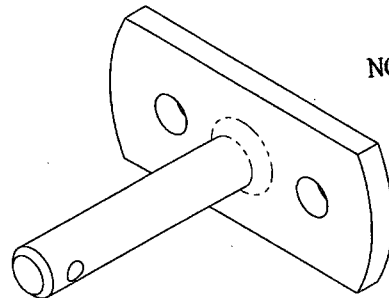
WITHOUT NOTICE  
WORK ORDER  
NO. 59214  
*25 10-5-08*



**D3953-1 GAS SPRING BRACKET**  
(FULL LID)



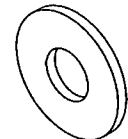
**D3953-3 GAS SPRING STUD, LID**



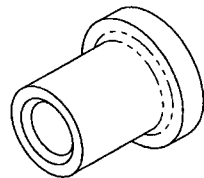
**D3953-5 GAS SPRING STUD, BASE**



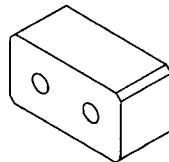
**D3953-7 GAS SPRING SPACER**



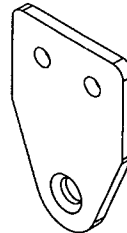
**D3953-9 GAS SPRING WASHER**



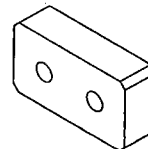
**D3953-11 GAS SPRING SPACER**



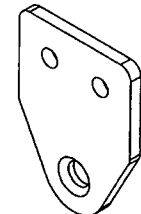
**D3953-13 GAS SPRING SPACER**  
(FULL LID)



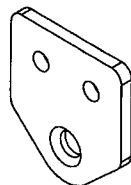
**D3953-15 GAS SPRING BRACKET**  
(SPLIT LID)



**D3953-17 GAS SPRING SPACER**  
(SPLIT LID)



**D3953-19 GAS SPRING BRACKET**  
(SQUARE BASKET)



**D3953-21 GAS SPRING BRACKET**  
(SQUARE BASKET)

**RELEASED**  
2010-02-26

C	PARTS -19 & -21 ADDED (SHT 18 & 4); CSK CALLOUT WAS CHAM (C6-2, B6-3, C6-4); & SYMM WAS & SYM ABOUT (C7-2, C7-4); SECTION C-C REPOSITIONED TO B2-4 REASON: ADDL PARTS REQD; DRAFTING ERRORS	JPH	10.01.29
B	SHEET 3 ZONE C1, DIM 0.05 MIN WAS 0.13, MULTIPLE DIMENSIONS MIN/MAX REMOVED TOLERANCE ADDED REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY.	AJS	09.11.11
A	NEW ISSUE	AJS	09.07.27
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	<b>D3953</b>	SHEET 1 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>GAS SPRING LID COMPONENTS</b>	NTS
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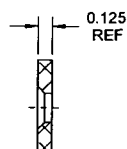
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

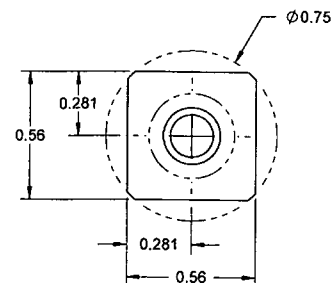
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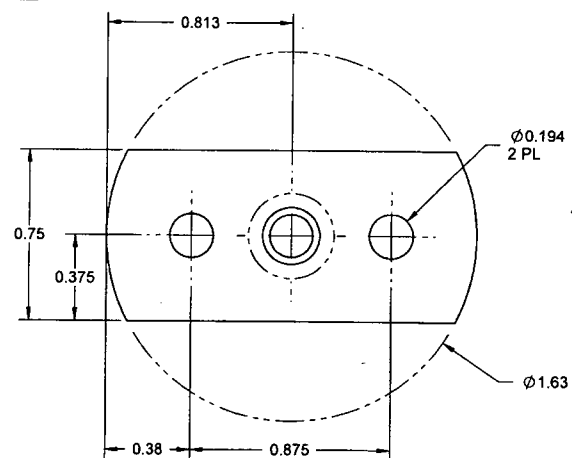
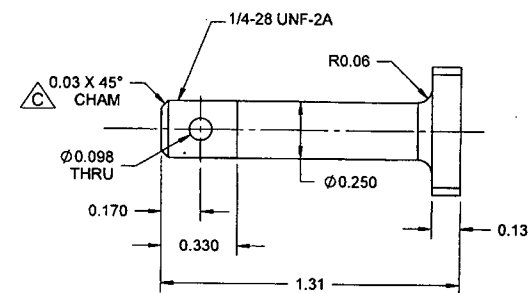
**NOTE:** Date & initial all entries



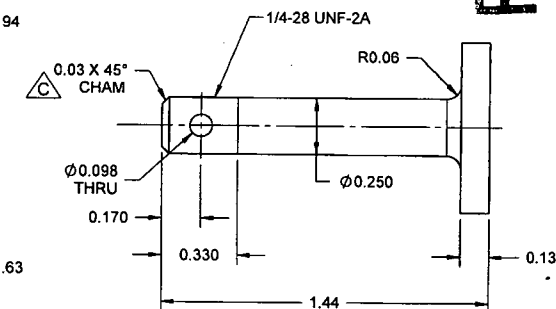
**SECTION A-A** C7-2



**D3953-3 GAS SPRING STUD, LID**



**D3953-5 GAS SPRING STUD, BASE**



1) MATERIAL -1: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S11GA

-3 & -5: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B  
OR:  
AIS1 304/316 STAINLESS STEEL ROD  
REF DART SPEC M304R

2) FINISH: N/A  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3853-X" USING FINE POINT PERMANENT INK MARKER  
7) WEIGHT -1: 0.11 lbs  
          -3: 0.03 lbs  
          -5: 0.06 lbs

DESIGN	AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA  DRAWING NO. <b>D3953</b>  TITLE <b>GAS SPRING LID COMPONENTS</b>  COPYRIGHT © 2009 BY DART AEROSPACE LTD. <small>THIS DOCUMENT IS PRIVATE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE KEPT CONFIDENTIAL AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.</small>	REV. C
DRAWN	JPH		SHEET 2 OF 4
CHECKED	<i>[Signature]</i>		SCALE
MFG. APPR.	<i>[Signature]</i>		NTS
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	10.01.29		

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2010-02-26

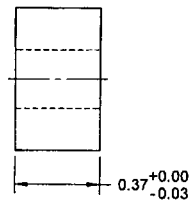
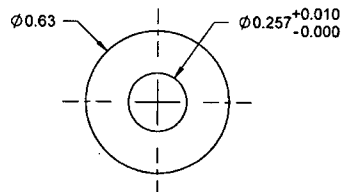
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

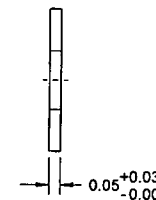
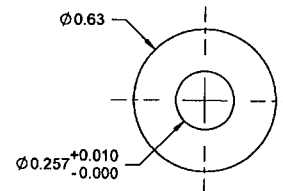
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

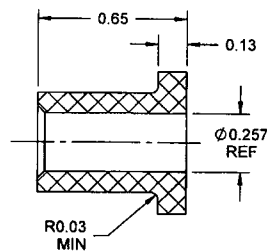
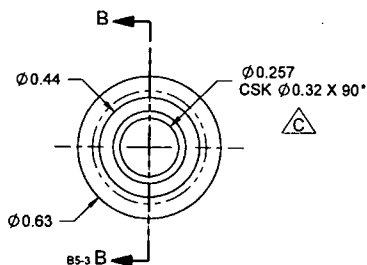
**NOTE:** Date & initial all entries



**D3953-7 GAS SPRING SPACER**

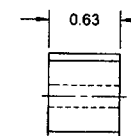
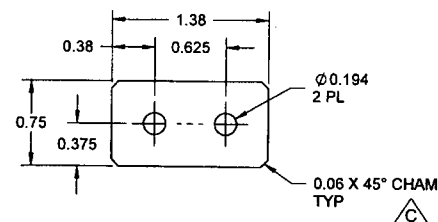


**D3953-9 GAS SPRING WASHER**



**SECTION B-B** 87-3

**D3953-11 GAS SPRING SPACER**



**D3953-13 GAS SPRING SPACER**

**NOTES:**

1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK  
REF DART SPEC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER

7) WEIGHT -7/-9/-11: < 0.01 lbs EACH

-13: 0.17 lbs

**RELEASED**  
2010-02-26

DESIGN	AJS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED	<i>[Signature]</i>	DRAWING NO. <b>D3953</b>	REV. C
MFG. APPR.	<i>[Signature]</i>	SHEET 3 OF 4	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>GAS SPRING LID COMPONENTS</b>	NTS
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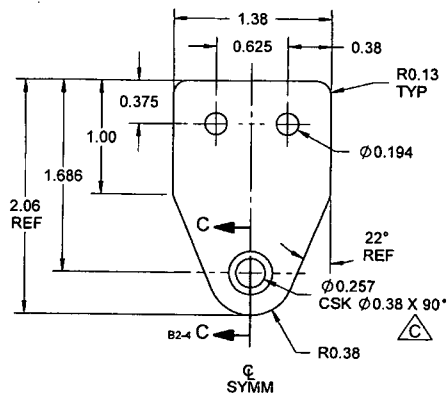
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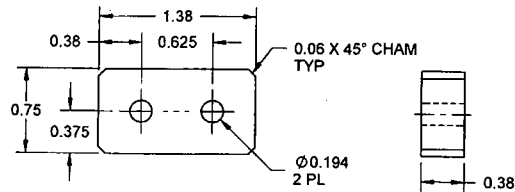
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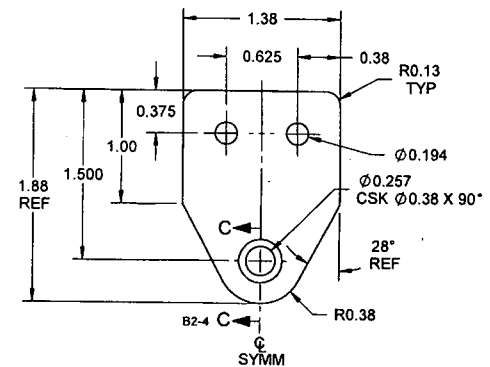
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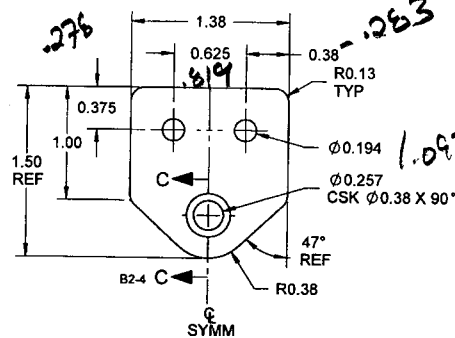
**D3953-15 GAS SPRING BRACKET**  
(SPLIT LID)



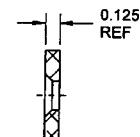
**D3953-17 GAS SPRING SPACER**  
(SPLIT LID)



**D3953-19 GAS SPRING BRACKET**  
(SQUARE BASKET)



**D3953-21 GAS SPRING BRACKET**  
(SQUARE BASKET)



**SECTION C-C**

**NOTES:**

1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S11GA

-17: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B

- 2) FINISH: N/A  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER  
7) WEIGHT -15: 0.08 lbs  
-17: 0.10 lbs  
-19: 0.07 lbs  
-21: 0.06 lbs

**RELEASED**  
2010-02-26

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	<b>D3953</b>	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>GAS SPRING LID COMPONENTS</b>	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries